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(B) REGISTRATION NUMBER: 25,146
(C) REFERENCE/DOCKET NUMBER: 3495-0111-12

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: 202-408-4000
(B) TELEFAX: 202-408-4400

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 714 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

ATGCATATGA AAAACATCAA AAAAAACCAG GTAATGAACC TCGGTCCGAA CTCTAAACTG 60
CTGAAAGAAT ACAAATCCCA GCTGATCGAA CTGAACATCG AACAGTTCGA AGCAGGTATC 120
GGTCTGATCC TGGGTGATGC TTACATCCGT TCTCGTGATG AAGGTAAAAC CTACTGTATG 180
CAGTTCGAGT GGAAAAACAA AGCATACATG GACCACGTAT GTCTGCTGTA CGATCAGTGG 240
GTACTGTCCC CGCCGCACAA AAAAGAACGT GTTAACCACC TGGGTAACCT GGTAATCACC 300
TGGGGCGCCC AGACTTTCAA ACACCAAGCT TTCAACAAAC TGGCTAACCT GTTCATCGTT 360
AACAACAAAA AAACCATCCC GAACAACCTG GTTGAAAACCT ACCTGACCCC GATGTCTCTG 420
GCATACTGGT TCATGGATGA TGGTGGTAAA TGGGATTACA ACAAAAACCTC TACCAACAAA 480
TCGATCGTAC TGAACACCCA GTCTTTCACT TTCGAAGAAG TAGAATACCT GGTTAAGGGT 540
CTGCGTAACA AATTCCAACCT GAACTGTTAC GTAAAAATCA AAAAAACAA ACCGATCATC 600
TACATCGATT CTATGTCTTA CCTGATCTTC TACAACCTGA TCAAACCGTA CCTGATCCCG 660
CAGATGATGT ACAAACCTGCC GAACACTATC TCCTCCGAAA CTTTCCTGAA ATAA 714

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 237 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Met His Met Lys Asn Ile Lys Lys Asn Gln Val Met Asn Leu Gly Pro
1 5 10 15
Asn Ser Lys Leu Leu Lys Glu Tyr Lys Ser Gln Leu Ile Glu Leu Asn
20 25 30
Ile Glu Gln Phe Glu Ala Gly Ile Gly Leu Ile Leu Gly Asp Ala Tyr
35 40 45
Ile Arg Ser Arg Asp Glu Gly Lys Thr Tyr Cys Met Gln Phe Glu Trp
50 55 60
Lys Asn Lys Ala Tyr Met Asp His Val Cys Leu Leu Tyr Asp Gln Trp
65 70 75 80
Val Leu Ser Pro Pro His Lys Lys Glu Arg Val Asn His Leu Gly Asn
85 90 95
Leu Val Ile Thr Trp Gly Ala Gln Thr Phe Lys His Gln Ala Phe Asn
100 105 110
Lys Leu Ala Asn Leu Phe Ile Val Asn Asn Lys Lys Thr Ile Pro Asn
115 120 125
Asn Leu Val Glu Asn Tyr Leu Thr Pro Met Ser Leu Ala Tyr Trp Phe
130 135 140
Met Asp Asp Gly Gly Lys Trp Asp Tyr Asn Lys Asn Ser Thr Asn Lys
145 150 155 160
Ser Ile Val Leu Asn Thr Gln Ser Phe Thr Phe Glu Glu Val Glu Tyr
165 170 175
Leu Val Lys Gly Leu Arg Asn Lys Phe Gln Leu Asn Cys Tyr Val Lys
180 185 190
Ile Asn Lys Asn Lys Pro Ile Ile Tyr Ile Asp Ser Met Ser Tyr Leu
195 200 205
Ile Phe Tyr Asn Leu Ile Lys Pro Tyr Leu Ile Pro Gln Met Met Tyr
210 215 220
Lys Leu Pro Asn Thr Ile Ser Ser Glu Thr Phe Leu Lys
225 230 235

(2) INFORMATION FOR SEQ ID NO:3:

50

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 722 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

AAAAATAAAA TCATATGAAA AATATTAAAA AAAATCAAGT AATCAATCTC GGTCTTATTT	60
CTAAATTATT AAAAGAATAT AAATCACAAT TAATTGAATT AAATATTGAA CAATTTGAAG	120
CAGGTATTGG TTTAATTTTA GGAGATGCTT ATATTCGTAG TCGTGATGAA GGTAAACTT	180
ATTGTATGCA ATTTGAGTGG AAAAATAAGG CACATGGA TCATGTATGT TTATTATATG	240
ATCAATGGGT ATTATCACCT CCTCATAAAA AAGAAAGAGT TAATCATTTA GGTAATTTAG	300
TAATTACCTG GGGAGCTCAA ACTTTTAAAC ATCAAGCTTT TAATAAATTA GCTAACTTAT	360
TTATTGTAAA TAATAAAAAA CTTATTCCTA ATAATTTAGT TGAAAATTAT TTAACACCTA	420
TGAGTCTGGC ATATTGGTTT ATGGATGATG GAGGTAAATG GGATTATAAT AAAAATTCTC	480
TTAATAAAAG TATTGTATTA AATACACAAA GTTTTACTTT TGAAGAAGTA GAATATTTAC	540
TTAAAGGTTT AAGAAATAAA TTTCAATTAA ATTGTTATGT TAAAATTAAT AAAAATAAAC	600
CAATTATTTA TATTGATTCT ATGAGTTATC TGATTTTTTA TAATTTAATT AAACCTTATT	660
TAATTCCTCA AATGATGTAT AACTGCCTA ATACTATTTT ATCCGAACT TTTTAAAT	720
AA	722

(2) INFORMATION FOR SEQ ID NO:4:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 235 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Met	Lys	Asn	Ile	Lys	Lys	Asn	Gln	Val	Met	Asn	Leu	Gly	Pro	Asn	Ser
1				5				10					15		

Lys	Leu	Leu	Lys	Glu	Tyr	Lys	Ser	Gln	Leu	Ile	Glu	Leu	Asn	Ile	Glu	20	25	30
Gln	Phe	Glu	Ala	Gly	Ile	Gly	Leu	Ile	Leu	Gly	Asp	Ala	Tyr	Ile	Arg	35	40	45
Ser	Arg	Asp	Glu	Gly	Lys	Thr	Tyr	Cys	Met	Gln	Phe	Glu	Trp	Lys	Asn	50	55	60
Lys	Ala	Tyr	Met	Asp	His	Val	Cys	Leu	Leu	Tyr	Asp	Gln	Trp	Val	Leu	65	70	75
Ser	Pro	Pro	His	Lys	Lys	Glu	Arg	Val	Asn	His	Leu	Gly	Asn	Leu	Val	85	90	95
Ile	Thr	Trp	Gly	Ala	Gln	Thr	Phe	Lys	His	Gln	Ala	Phe	Asn	Lys	Leu	100	105	110
Ala	Asn	Leu	Phe	Ile	Val	Asn	Asn	Lys	Lys	Leu	Ile	Pro	Asn	Asn	Leu	115	120	125
Val	Glu	Asn	Tyr	Leu	Thr	Pro	Met	Ser	Leu	Ala	Tyr	Trp	Phe	Met	Asp	130	135	140
Asp	Gly	Gly	Lys	Trp	Asp	Tyr	Asn	Lys	Asn	Ser	Leu	Asn	Lys	Ser	Ile	145	150	155
Val	Leu	Asn	Thr	Gln	Ser	Phe	Thr	Phe	Glu	Glu	Val	Cys	Tyr	Leu	Val	165	170	175
Lys	Gly	Leu	Arg	Asn	Lys	Phe	Gln	Leu	Asn	Cys	Tyr	Val	Lys	Ile	Asn	180	185	190
Lys	Asn	Lys	Pro	Ile	Ile	Tyr	Ile	Asp	Ser	Met	Ser	Tyr	Leu	Ile	Phe	195	200	205
Tyr	Asn	Ile	Ile	Lys	Pro	Tyr	Leu	Ile	Pro	Gln	Met	Met	Tyr	Lys	Leu	210	215	220
Pro	Asn	Thr	Ile	Ser	Ser	Glu	Thr	Phe	Leu	Lys						225	230	235

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 754 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

TTTCACACAG GAAACAGCTA TGACCATGAT TACGAATTCT CATGTTTGAC AGCTTATCAT	600
CGATAAGCTT TAATGCGGTA GTTTATCACA GTTAAATTGC TAACGCAGTC AGGCACCGTG	660
TATGAAATCT AACAAATGCGC TCATCGTCAT CCTCGGCACC GTCACCCTGG ATGCTGTAGG	720
CATAGGCTTG GTTATGCCGG TACTGCCGGG CCTCTTGCGG GATATCCGCC TGATGCGTGA	780
ACGTGACGGA CGTAACCACC GCGACATGTG TGTGCTGTTC CGCTGGGCAT GCCAGGACAA	840
CTTCTGGTCC GGTAACGTGC TGAGCCCGGC CAAGCTTACT CCCCATCCCC CTGTTGACAA	900
TTAATCATCG GCTCGTATAA TGTGTGGAAT TGTGAGCGGA TAACAATTTT ACACAGGAAA	960
CAGGATCCAT GCATATGAAA AACATCAAAA AAAACCAGGT AATGAACCTG GGTCCGAACT	1020
CTAAACTGCT GAAAGAATAC AAATCCCAGC TGATCGAACT GAACATCGAA CAGTTCGAAG	1080
CAGGTATCGG TCTGATCCTG GGTGATGCTT ACATCCGTTT TCGTGATGAA GGTAAAACCT	1140
ACTGTATGCA GTTCGAGTGG AAAAACAAAG CATAATGGA CCACGTATGT CTGCTGTACG	1200
ATCAGTGGGT ACTGTCCCCG CCGCACAAAA AAGAACGTGT TAACCACCTG GGTAACCTGG	1260
TAATCACCTG GGGCGCCCAG ACTTTCAAAC ACCAAGCTTT CAACAACTG GCTAACCTGT	1320
TCATCGTTAA CAACAAAAAA ACCATCCCGA ACAACCTGGT TGAAAACTAC CTGACCCCGA	1380
TGTCTCTGGC ATACTGGTTC ATGGATGATG GTGGTAAATG GGATTACAAC AAAAATCTA	1440
CCAACAAATC GATCGTACTG AACACCCAGT CTTTCACTTT CGAAGAAGTA GAATACCTGG	1500
TTAAGGGTCT GCGTAACAAA TTCCAATGA ACTGTTACGT AAAAATCAAC AAAAACAAC	1560
CGATCATCTA CATCGATTCT ATGTCTTACC TGATCTTCTA CAACCTGATC AAACCGTACC	1620
TCATCCCCCA GATGATGTAC AAACTGCCGA AACTATCTC CTCCGAACT TTCCTGAAAT	1680
AATAAGTCGA CCTGCAGCCC AAGCTTGGCA CTGGCCGTCG TTTTACAACG TCGTGACT	1738

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

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(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 80 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

Met	Lys	Ser	Asn	Asn	Ala	Leu	Ile	Val	Ile	Leu	Gly	Thr	Val	Thr	Leu
1				5					10					15	
Asp	Ala	Val	Gly	Ile	Gly	Leu	Val	Met	Pro	Val	Leu	Pro	Gly	Leu	Leu
			20					25					30		
Arg	Asp	Ile	Arg	Leu	Met	Arg	Glu	Arg	Asp	Gly	Arg	Asn	His	Arg	Asp
			35				40					45			
Met	Cys	Val	Leu	Phe	Arg	Trp	Ala	Cys	Gln	Asp	Asn	Phe	Trp	Ser	Gly
	50					55					60				
Asn	Val	Leu	Ser	Pro	Ala	Lys	Leu	Thr	Pro	His	Pro	Pro	Val	Asp	Asn
65					70					75					80

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 7 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

Met Cys Gly Ile Val Ser Gly
1 5

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 237 amino acids
 (B) TYPE: amino acid

63

(2) INFORMATION FOR SEQ ID NO:17:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 26 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

CGCTAGGGAT AACAGGGTAA TATAGC

26

(2) INFORMATION FOR SEQ ID NO:18:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 26 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

GCGATCCCTA TTGTCCCATT ATATCG

26

(2) INFORMATION FOR SEQ ID NO:19:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 26 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

TTCTCATGAT TAGCTCTAAT CCATGG

26

(2) INFORMATION FOR SEQ ID NO:20:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 26 base pairs
 - (B) TYPE: nucleic acid

605

- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

AAGAGTACTA ATCGAGATTA GGTACC

26

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

CTTTGGTCAT CCAGAAGTAT ATATTT

26

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

GAAACCAAGTA GGTCTTCATA TATAAA

26

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

TAACGGTCCT AAGGTAGCGA AATTCA

26

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

ATTGCCAGGA TTCCATCGCT TTAAGT

26

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

TGACTCTCTT AAGGTAGCCA AATGCC

26

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

ACTGAGAGAA TTCCATCGGT TTACGG

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(2) INFORMATION FOR SEQ ID NO:27:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 26 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

CGAGGTTTTG GTAACATATT ATTACC

26

(2) INFORMATION FOR SEQ ID NO:28:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 26 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

CCTCCAAAAC CATTGATAAA TAATGG

26

(2) INFORMATION FOR SEQ ID NO:29:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 26 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

GGGTTCAAAA CGTCGTGAGA CAGTTT

26

(2) INFORMATION FOR SEQ ID NO:30:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 26 base pairs
 - (B) TYPE: nucleic acid

68

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(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

CCCAAGTTTT GCAGCACTCT GTCAAA

(2) INFORMATION FOR SEO ID NO:31:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

(2) INFORMATION FOR SEQ ID NO:32:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

(2) INFORMATION FOR SEQ ID NO:33:

609

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

CTTTCGCAA CAGTATAATT TTATAA

26

(2) INFORMATION FOR SEQ ID NO:34:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

GAAAGGCGTT GTCATATTAA AATATT

26

(2) INFORMATION FOR SEQ ID NO:35:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

ACCATGGGGT CAAATGTCTT TCTGGG

26

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

TGGTACCCCA GTTTACAGAA AGACCC

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(A) LENGTH: 26 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

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GTGCCTGAAT GATATTTATT ACCTTT

26

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

GTGCCTGAAT GATATTTATT ACCTTT

26

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 39 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

CAACGCTCAG TAGATGTTTT CTTGGGTCTA CCGTTTAAT

39

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 39 base pairs
(B) TYPE: nucleic acid

- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

GTTGCGAGTC ATCTACAAAA GAACCCAGAT GGCAAATTA

39

(2) INFORMATION FOR SEQ ID NO:41:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 32 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

CAAGCTTATG AGTATGAAGT GAACACGTTA TT

32

(2) INFORMATION FOR SEQ ID NO:42:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 32 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

GTTCGAATAC TCATACTTCA CTTGTGCAAT AA

32

(2) INFORMATION FOR SEQ ID NO:43:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

GCTATTCGTT TTTATGTATC TTTTGCGTGT AGCTTTAA

38

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

CGATAAGCAA AAATACATAG AAAACGCACA TGGAAATT

38

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 80 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

CCAAGCTCGA ATTCGCATGC TCTAGAGCTC GGTACCCGGG ATCCTGCAGT CGACGCTAGG

60

GATAACAGGG TAATACAGAT

80

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 80 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

13

GGTTCGAGCT TAAGCGTACG AGATCTCGAG CCATGGGCCC TAGGACGTCA GCTGCGATCC 60
CTATTGTCCC ATTATGTCTA 80

(2) INFORMATION FOR SEQ ID NO:47:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 80 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

ATCAGATCTA AGCTTGCATG CCTGCAGGTC GACTCTAGAG GATCCCCGGG TACCGAGCTC 60
GAATTCACTG GCCGTCGTTT 80

(2) INFORMATION FOR SEQ ID NO:48:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 80 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:

TAGTCTAGAT TCGAACGTAC GGACGTCCAG CTGAGATCTC CTAGGGGCCC ATGGCTCGAG 60
CTTAAGTGAC CGGCAGCAAA 80

(2) INFORMATION FOR SEQ ID NO:49:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 80 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

74

FOBT-69T9E860

TACAACGTCG TGACTGGGAA AACCCCTGGCG TTACCCAAC TAAATCGCCTT GCAGCACATC 60

CCCCTTTTCGC CAGCTGGCGT 80

(2) INFORMATION FOR SEQ ID NO:50:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 80 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

ATGTTGCAGC ACTGACCCTT TTGGGACCGC AATGGGTTGA ATTAGCGGAA CGTCGTGTAG 60

GGGGAAAGCG GTCGACCGCA 80

(2) INFORMATION FOR SEQ ID NO:51:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

TAGGGATAAC AGGGTAAT 18

(2) INFORMATION FOR SEQ ID NO:52:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

ATCCCTATTG TCCCATTA 18

TOP: 6949860

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